AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for improving corrosion resistance of a turbine engine rotor component, wherein the rotor component is a compressor disk, a compressor seal element, a [[or]] turbine disk or a turbine seal element, said rotor component being made of a nickel-base alloy and having a service operating temperature of from about 540°C to about 815°C, the method comprising the step of implanting aluminum ions, chromium ions, or mixtures thereof into the surface of the component.

2. (canceled)

3. (canceled)

4. (previously presented) The method of claim 1 further comprising implanting yttrium ions, cerium ions, zirconium ions, hafnium ions, or silicon ions, or mixtures thereof, into the surface of the component.

5. (original) The method of claim 1 wherein the ions are implanted to a depth of up to about 2 microns.

6. (original) The method of claim 5 wherein the ions are implanted to a depth of from about 0.1 to about 0.5 microns.

7. (original) The method of claim 1 wherein the ion implantation is conducted at a temperature of from about 20°C to about 700°C.

8. (original) The method of claim 7 wherein the ion implantation is conducted at a temperature of from about 20°C to about 320°C.

9. (original) The method of claim 8 wherein the ions are implanted to a depth of from about 0.1 to about 0.5 microns.

10. (original) The method of claim 1 further comprising the step of heating the implanted component in a nonoxidizing atmosphere to a temperature of from about 500°C to about 800°C to diffuse the ions into the surface of the component.

11. (original) The method of claim 9 further comprising the step of heating the implanted component in a nonoxidizing atmosphere to a temperature of from about 600°C to about 700°C to diffuse the ions into the surface of the component.

12. (original) The method of claim 1 further comprising the step of heating or maintaining the implanted component at a temperature of from about 450°C to about 800°C in the presence of oxygen to form an oxide coating on the surface of the component.

13. (original) The method of claim 9 further comprising the step of heating or maintaining the implanted component at a temperature of from about 600°C to about 700°C in the presence of oxygen to form an oxide coating having a thickness of from about 0.5 to about 3 microns on the surface of the component.

14. (currently amended) A method for improving corrosion resistance of a turbine engine rotor component, comprising the steps of:

(a) providing a turbine engine rotor component selected from the group consisting of compressor <u>disks, compressor seal elements,</u> [[and]] turbine disks and <u>turbine</u> seal elements<u>, said rotor component being</u> made of a nickel-base alloy and having a service operating temperature of from about 540°C to about 815°C;

(b) implanting aluminum ions, chromium ions, or mixtures thereof into the surface of the rotor component to a depth of up to about 2 microns; and

(c) heating the implanted component in the presence of oxygen to form an oxide coating on the surface of the component.

15. (canceled)

16. (original) The method of claim 14 further comprising implanting yttrium ions, cerium ions, zirconium ions, hafnium ions, or silicon ions, or mixtures thereof, on the surface of the component.

17. (original) The method of claim 14 wherein the ion implantation is conducted at a temperature of from about 20°C to about 320°C.

18. (original) The method of claim 17 wherein the ions are implanted to a depth of from about 0.1 to about 0.5 microns.

19. (original) The method of claim 14 comprising the step of heating the component to a temperature of from about 450°C to about 800°C in the presence of oxygen to form an oxide coating having a thickness of from about 0.5 to about 3 microns on the surface of the component.

20. (original) The method of claim 18 comprising the step of heating the component at a temperature of from about 600°C to about 700°C in the presence of oxygen to form an oxide coating having a thickness of from about 0.5 to about 3 microns on the surface of the component.

21.-30. (canceled)